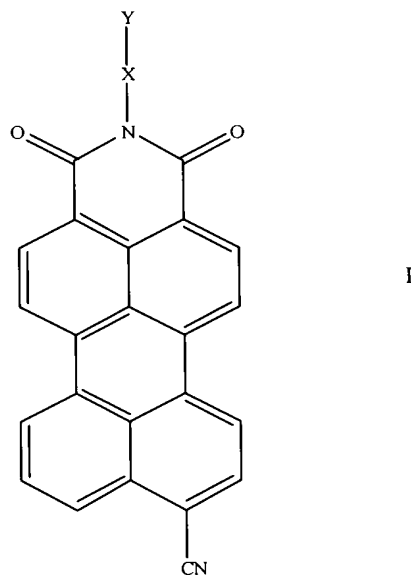


IN THE CLAIMS

Please amend the claims as follows:

1. (previously presented) A 9-cyano-substituted perylene-3,4-dicarboxylic monoimide of the general formula I



where the variables are defined as follows:

X is a chemical bond;

C₁-C₃₀-alkylene whose carbon chain may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties, and which may be substituted by -COOR¹, -SO₃R¹, cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic; C₅-C₈-cycloalkylene whose carbon framework may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and/or may be mono- or polysubstituted by C₁-C₁₂-alkyl, -COOR¹, -SO₃R¹, cyano and/or C₁-C₆-alkoxy;

arylene or hetarylene, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -COOR¹, -SO₃R¹, -CONH-R¹ and/or -NH-COR¹; C₁-C₂₀-alkylarylene or -hetarylene whose alkylene group may in each case be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and which may in each case be mono- or polysubstituted by -COOR¹, -SO₃R¹, -CONHR¹, -NHCOR¹, cyano, C₁-C₁₈-alkyl, C₁-C₆-alkoxy and/or a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

aryl- or hetaryl-C₁-C₂₀-alkylene, whose alkylene group may in each case be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and which may each be mono- or polysubstituted by -COOR¹, -SO₃R¹, -CONHR¹, -NHCOR¹, cyano, C₁-C₁₈-alkyl, C₁-C₆-alkoxy and/or a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

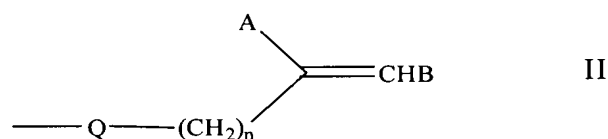
Y is a functional group Y' or a polymerizable group P;

or

X-Y together is an R radical;

Y' is amino, hydroxyl, -COOH, -SO₃H, chlorine or bromine;

P is a radical of the general formula II



A, B

are each independently hydrogen, C₁-C₆-alkyl or phenyl, or are together a cyclopentene or cyclohexene ring which contains the double bond to which A and B are bonded;

Q is a chemical bond;

an -O-, -NR²-, -S-, -OCO-, -OCOO-, -OCONR³-, -NR³CO-, -NR³COO-, -NR³CONR⁴-, -CO-, -COO-, -CONR³-, -SO₂-O-, -SO₂NR³-, -O-SO₂- or -NR³SO₂- moiety;

n is 0, 1, 2 or 3;

R is hydrogen;

C₁-C₃₀-alkyl whose carbon chain may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties, and which may be substituted by cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

C₅-C₈-cycloalkyl whose carbon framework may be interrupted by one or more -O-, -S- and/or -NR¹- moieties and/or may be mono- or polysubstituted by C₁-C₆-alkyl; aryl or hetaryl, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -CONHR⁵, -NHCOR⁵ and/or aryl- or hetarylazo, each of which may be substituted by C₁-C₁₀-alkyl, C₁-C₆-alkoxy and/or cyano;

R¹ is hydrogen or C₁-C₆-alkyl;

R² is hydrogen, C₁-C₆-alkyl, aryl, aryl-C₁-C₆-alkyl, C₁-C₆-alkylcarbonyl, arylcarbonyl or formyl;

R³, R⁴

are each independently hydrogen; C₁-C₆-alkyl; aryl or aryl-C₁-C₆-alkyl, each of which may be substituted by hydroxyl, halogen, C₁-C₆-alkyl and/or C₁-C₆-alkoxy;

R⁵

is hydrogen; C₁-C₁₈-alkyl; aryl or hetaryl, each of which may be substituted by C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, hydroxyl, carboxyl and/or cyano.

2. (original) A perylene-3,4-dicarboxylic monoimide of the general formula I as claimed in claim 1, in which the variables are defined as follows:

X

is C₁-C₃₀-alkylene, whose carbon chain may be interrupted by one or more -O- and/or -CO- moieties, and which may be substituted by -COOR¹, cyano, C₁-C₆-alkoxy and/or aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy;
C₅-C₈-cycloalkylene which may be mono- or polysubstituted by C₁-C₁₂-alkyl, -COOR¹, cyano and/or C₁-C₆-alkoxy;
arylene or hetarylene, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -COOR¹, -CONH-R¹ and/or -NHCOR¹;
C₁-C₂₀-alkylarylene or -hetarylene whose alkylene group may in each case be interrupted by one or more -O- and/or -CO- moieties and which may in each case be mono- or polysubstituted by -COOR¹, cyano, C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy; aryl- or hetaryl-C₁-C₂₀-alkylene, whose alkylene group may in each case be interrupted by one or more -O- and/or -CO- moieties and which may in each case be mono- or polysubstituted by -COOR¹, cyano, C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy;

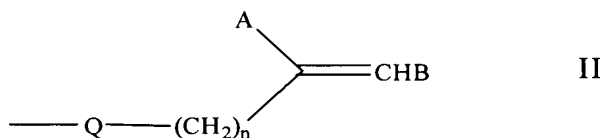
Y is a functional group Y' or a polymerizable group P;

or

X-Y together is an R radical;

Y' is amino, hydroxyl, -COOH or bromine;

P is a radical of the general formula II



A, B

are each independently hydrogen, C₁-C₆-alkyl or phenyl, or are together a cyclopentene or cyclohexene ring which contains the double bond to which A and B are bonded;

Q is a chemical bond;

a -O-, -NR²-, -OCO-, -NR³CO-, -COO- or -CONR³- moiety;

n is 0, 1, 2 or 3;

R is hydrogen;

C₁-C₃₀-alkyl whose carbon chain may be interrupted by one or more -O-, -NR¹- and/or -CO- moieties, and which may be substituted by cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

C₅-C₈-cycloalkyl whose carbon framework may be interrupted by one or more -O- and/or -NR¹- moieties and/or may be mono- or polysubstituted by C₁-C₆-alkyl;

aryl or hetaryl, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano and/or aryl- or hetarylazo, each of which may be substituted by C₁-C₁₀-alkyl, C₁-C₆-alkoxy and/or cyano;

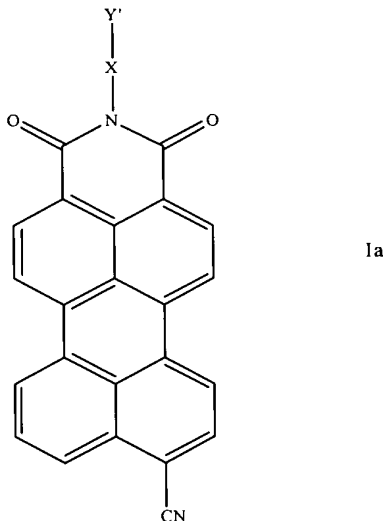
R¹ is hydrogen or C₁-C₆-alkyl;

R² is hydrogen, C₁-C₆-alkyl, aryl, aryl-C₁-C₆-alkyl;

R³

is hydrogen; C₁-C₆-alkyl; aryl or aryl-C₁-C₆-alkyl, each of which may be substituted by hydroxyl, C₁-C₆-alkyl and/or C₁-C₆-alkoxy.

3. (currently amended) A process for preparing perylene-3,4-dicarboxylic monoimides of the general formula Ia



where X and Y' are as defined in claim 1

X is a chemical bond;

C₁-C₃₀-alkylene whose carbon chain may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties, and which may be substituted by -COOR¹, -SO₃R¹, cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic; C₅-C₈-cycloalkylene whose carbon framework may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and/or may be mono- or polysubstituted by C₁-C₁₂-alkyl, -COOR¹, -SO₃R¹, cyano and/or C₁-C₆-alkoxy;

arylene or hetarylene, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -COOR¹, -SO₃R¹, -CONH-R¹ and/or -NH-COR¹; C₁-C₂₀-alkylarylene or -hetarylene whose alkylene group may in each case be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and which may in each case be mono- or polysubstituted by -COOR¹, -SO₃R¹, -CONHR¹, -NHCOR¹, cyano, C₁-C₁₈-alkyl, C₁-C₆-alkoxy and/or a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

aryl- or hetaryl-C₁-C₂₀-alkylene, whose alkylene group may in each case be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties and which may each be mono- or polysubstituted by -COOR¹, -SO₃R¹, -CONHR¹, -NHCOR¹, cyano, C₁-C₁₈-alkyl, C₁-C₆-alkoxy and/or a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

Y' is amino, hydroxyl, -COOH, -SO₃H, chlorine or bromine;

or X-Y' together are ~~one of the R radicals defined in claim 1~~

R is hydrogen;

C₁-C₃₀-alkyl whose carbon chain may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties, and which may be substituted by cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

C₅-C₈-cycloalkyl whose carbon framework may be interrupted by one or more -O-, -S- and/or -NR¹- moieties and/or may be mono- or polysubstituted by C₁-C₆-alkyl;

aryl or hetaryl, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -CONHR⁵, -NHCOR⁵ and/or aryl- or hetarylazo, each of which may be substituted by C₁-C₁₀-alkyl, C₁-C₆-alkoxy and/or cyano;

R¹ is hydrogen or C₁-C₆-alkyl;

R⁵

is hydrogen; C₁-C₁₈-alkyl; aryl or hetaryl, each of which may be substituted by C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, hydroxyl, carboxyl and/or cyano,

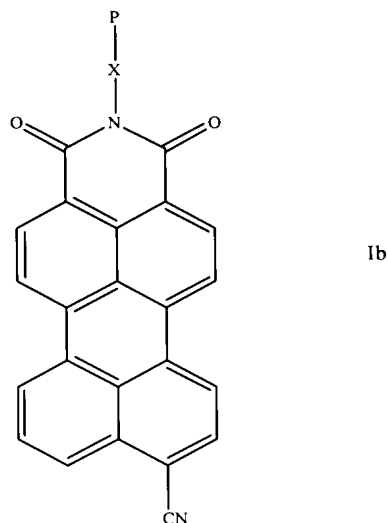
which comprises

- a) brominating perylene-3,4-dicarboxylic anhydride in the 9-position using elemental bromine in concentrated sulfuric acid or an aliphatic monocarboxylic acid,
- b) reacting the 9-bromoperylene-3,4-dicarboxylic anhydride obtained in step a) with copper(I) cyanide in excess in a high-boiling inert diluent, optionally with the addition of a basic nitrogen compound or of a nitrogen heterocycle as a catalyst, and
- c) reacting the 9-cyanoperylene-3,4-dicarboxylic anhydride obtained in step b) with a primary amine of the general formula IV



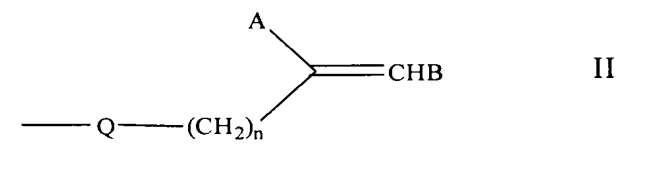
in water or an inert organic solvent, optionally with the addition of an imidation catalyst, to give the desired 9-cyanoperylene-3,4-dicarboxylic monoimide of the formula Ia.

4. (currently amended) A process for preparing perylene-3,4-dicarboxylic monoimides of the general formula Ib



where X is as defined in claim 4 3 and P is one of the radicals of the formula II
~~defined in claim 1~~

is a radical of the general formula II

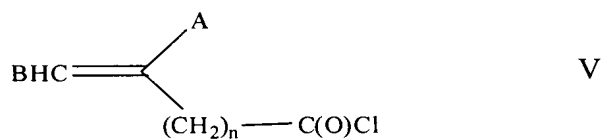


A, B

are each independently hydrogen, C₁-C₆-alkyl or phenyl, or are together a
 cyclopentene or cyclohexene ring which contains the double bond to which A and B
 are bonded;

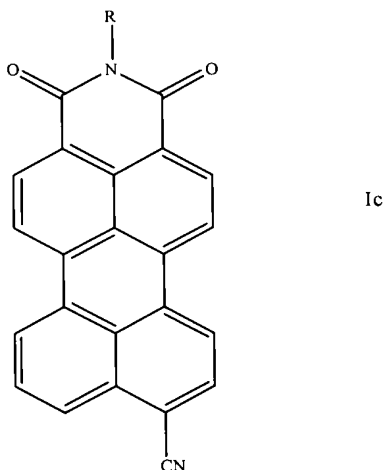
n is 0, 1, 2 or 3;

where Q is -OCO- or -NHCO-, which comprises reacting a perylene-3,4-dicarboxylic
 monoimide of the formula Ia as defined in claim 3 where Y' is amino or hydroxyl with a
 carbonyl chloride of the general formula V



~~where the variables are as defined in claim 1~~ in an inert aprotic diluent, with the addition of a nitrogen base.

5. (currently amended) A process for preparing perylene-3,4-dicarboxylic monoimides of the general formula Ic



where R is ~~as defined in claim 1~~

hydrogen;

C₁-C₃₀-alkyl whose carbon chain may be interrupted by one or more -O-, -S-, -NR¹-, -CO- and/or -SO₂- moieties, and which may be substituted by cyano, C₁-C₆-alkoxy, aryl which may be substituted by C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy, and/or be mono- or polysubstituted by a 5- to 7-membered heterocyclic radical which is bonded via a nitrogen atom and may contain further heteroatoms and be aromatic;

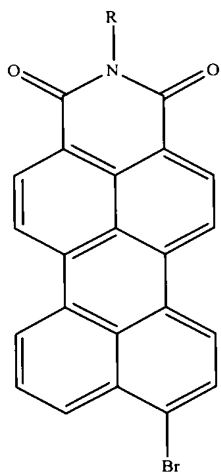
C₅-C₈-cycloalkyl whose carbon framework may be interrupted by one or more -O-, -S- and/or -NR¹- moieties and/or may be mono- or polysubstituted by C₁-C₆-alkyl;

aryl or hetaryl, each of which may be mono- or polysubstituted by C₁-C₁₈-alkyl, C₁-C₆-alkoxy, cyano, -CONHR⁵, -NHCOR⁵ and/or aryl- or hetarylazo, each of which may be substituted by C₁-C₁₀-alkyl, C₁-C₆-alkoxy and/or cyano;

R¹ is hydrogen or C₁-C₆-alkyl;

R⁵

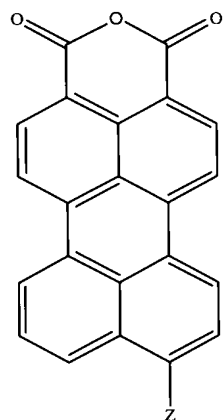
is hydrogen; C₁-C₁₈-alkyl; aryl or hetaryl, each of which may be substituted by C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, hydroxyl, carboxyl and/or cyano, which comprises converting a 9-bromoperylene-3,4-dicarboxylic monoimide of the general formula VI



VI

to the desired 9-cyanoperylene-3,4-dicarboxylic monoimide of the formula Ic by reacting with copper(I) cyanide without a diluent or in a high-boiling inert diluent, optionally with the addition of a basic nitrogen compound or of a nitrogen heterocycle as a catalyst.

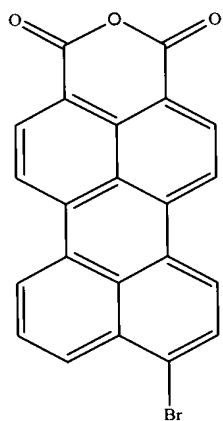
6. (withdrawn) A perylene-3,4-dicarboxylic anhydride, substituted in the 9-position, of the general formula III



III

where Z is bromine or cyano.

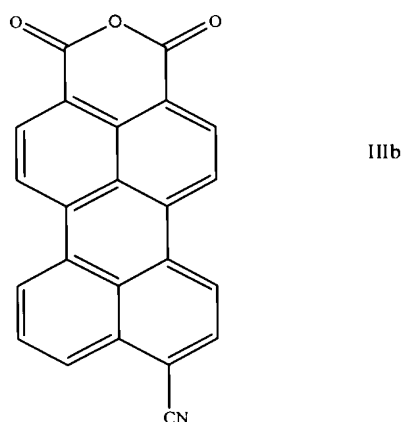
7. (withdrawn) A process for preparing 9-bromoperylene-3,4-dicarboxylic anhydride
of the formula IIIa



IIIa

which comprises selectively brominating perylene-3,4- dicarboxylic anhydride in the 9-position with elemental bromine in concentrated sulfuric acid or an aliphatic monocarboxylic acid.

8. (withdrawn) A process for preparing 9-cyanoperylene-3,4-dicarboxylic anhydride of the formula IIIb



which comprises reacting 9-bromoperylene-3,4-dicarboxylic anhydride with copper(I) cyanide in excess in a high-boiling inert diluent, optionally with the addition of a basic nitrogen compound or of a nitrogen heterocycle as a catalyst.

9. (previously presented) A method for coloring high molecular weight organic and inorganic materials comprising utilizing the 9-cyano-substituted perylene-3,4-dicarboxylic monoimides of the general formula I as claimed in claim 1 as a colorant.

10. (previously presented) The method as claimed in claim 9, wherein plastics, paints, printing inks, inorganic-organic composites and oxidic layer systems are colored.

11. (previously presented) A composition comprising the 9-cyano-substituted perylene-3,4-dicarboxylic monomide of the general formula I as claimed in claim 1 wherein said composition is a dispersant, a pigment additive for organic pigments and an intermediate for the preparation of fluorescent dyes and pigment additives.

12. (previously presented) A method for producing aqueous polymer dispersions and inkjet inks absorbing and/or emitting in the yellow region of the electromagnetic spectrum comprising utilizing the 9-cyano-substituted perylene-3,4-dicarboxylic monoimides of the general formula I as claimed in claim 1.

13. (previously presented) A composition comprising the 9-cyano-substituted perylene-3,4-dicarboxylic monoimide of the general formula I as claimed in claim 1 wherein said composition is a coloring or color-correcting component in emissive and transfective color filters and in retroreflective components.

14. (previously presented) A composition comprising the 9-cyano-substituted perylene-3,4-dicarboxylic monoimide of the general formula I as claimed in claim 1 wherein said composition is a photoconductor in electrophotography, an emitter in electroluminescence and chemiluminescence applications, an active component in fluorescence conversion, in bioluminescence arrays and in photovoltaics and a laser dye.